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10/587,353

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Shoji Yuyama

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12/14/2010

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EXAMINER

NEWMAN, MICHAEL A

ART UNIT

PAPER NUMBER

2624

NOTIFICATION DATE

DELIVERY MODE

12/14/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/587,353 | Applicant(s) YUYAMA ET AL. | |
| | Examiner MICHAEL A. NEWMAN | Art Unit 2624 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 29th, 2010 has been entered.

Response to Amendment

2. The amendment filed on September 29th, 2010 has been entered.
3. In view of the amendment to the claims, the amendment of claim 14 has been acknowledged. Claims 1 – 13 were previously cancelled.

Response to Arguments

4. Applicant's arguments with respect to claim 14 have been considered but are moot in view of the new ground(s) of rejection.
5. Note that the current claim language in claim 14 requires that the displaying unit display the vial take-out error confirmation screen when a vial is taken out from a take-out port. In the new rejection set forth below, the prior art combination teaches that the drug verification information is displayed when a pharmacist takes out a vial from an appropriate cubby hole slot and scans the barcode on the vial's label. That is, in the art,

the process of taking out the vial includes scanning the barcode of the label. The Examiner submits that this is a reasonable interpretation.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 14 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eller et al. (U.S. Pg Pub No. 2008/0056556) in view of Pearson (U.S. Patent No. 5,292,029) and Williams et al. (U.S. Patent No. 5,597,995). Hereinafter referred to as Eller, Pearson and Williams, respectively.

a. Regarding claim 14, Eller teaches a tablet storage and take-out apparatus for storing plural kinds of tablets, filling a vial with a specified number and type of the tablets according to prescription data of a prescription, attaching a cap to the vial (**Eller fig. 2**), the apparatus comprising: a photographing unit for photographing an interior of the vial after filling the vial with the tablets and before attaching the cap on the vial (**Eller fig. 1 'pill camera' 10 – PP0025**); a storing unit for storing an image photographed by the photographing unit (**Eller fig. 1 'storage device' 14 – PP0025**); a prescription reading unit for reading a barcode of the prescription (**Eller fig. 1 'label camera' 12 – PP0034**); a displaying unit for displaying a vial error confirmation screen on an operation display panel (**Eller fig. 1 'work station' 28 – PP0035**), wherein the displaying unit is operable to display both the prescription data of the prescription and an image of the tablet

corresponding to the prescription data of the prescription from the image photographed by the photographing unit and stored in the storing unit on the vial error confirmation screen so as to permit auditing of whether the tablets have been filled in accordance with the prescription data (**Eller fig. 4 as described in PP0035 and discussed in PP0026**). Eller teaches that the system can be used in a pallet-type dispensing system in which bottles are arranged into rows and columns (**Eller PP0028**). However, Eller **does not teach** transporting the vial to an empty one of a plurality of take-out ports for storage and taking out the vial, an indicating unit for indicating the take-out port storing the vial containing the tablets corresponding to the prescription read by the prescription reading unit.

Pertaining to the same field of endeavor, Pearson teaches a drug dispensing cart in which a plurality of prepared capsule containers are stored in a set of drawers or cubicles. Each capsule container is linked to a unique patient ID. When the operator enters the patient ID, the system turns on an indicator lamp on the drawer holding that patient's capsule container. The system also provides patient and drug information on a display for a dispensing nurse to compare with the medication (Pearson Col. 5 lines 14 – 53). Pearson further teaches that the system allows for medication containers to be filled in advanced, so that dispensing can be done more efficiently and with less errors (Pearson Col. 2 lines 17 – 24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store the containers filled and imaged

by Eller's system in a storage system having a plurality of storage locations, such as Pearson's cabinets, which upon entry of a unique identifier, such as Eller's prescription barcode, would light up a holding cabinet locator light and would display, to a dispensing individual, the prescription information and drug images taught by Eller, so as to improve efficiency and safety by enabling prescription containers to be filled ahead of time and stored, while allowing the dispensing individual to quickly find each container, and to easily verify its corresponding prescription data. As discussed, Pearson teaches displaying verification prescription information when a nurse enters a unique patient ID. Both Eller and Pearson; however, **do not appear teach** displaying the drug error confirmation screen when the vial is taken out from the indicated take-out port. **Pertaining to the same field of endeavor, Williams teaches a drug dispensing system in which filled and capped vials are placed in cubby hole slots. When the drug is to be delivered, the pharmacist performs a final quality control step. In the final quality control step the pharmacist pulls the vial out the cubby hole and scans the prescription bar code on the vial label, which causes the image of the original prescription and the drug product to be displayed on a workstation, and allows a pharmacist to verify the accuracy of the fill (Williams Col. 10 lines 16 – 42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to display the drug verification window taught by Eller when the vial is taken out of**

Pearson's cabinet and scanned by the bar-code reader, as taught by Williams, in order to only display the drug verification information corresponding to the specific drug that should be contained in the vial being currently held by the pharmacist, so as to further ensure accuracy and improve dispensing efficiency.

b. Regarding claim 15, Eller, as modified by Pearson and Williams, further teaches the tablet storage and take-out apparatus of claim 14, further comprising: a vial reading unit for reading a barcode of a label of the vial (**Eller fig. 1 'label camera' 12 – PP0034**); and a displaying unit for displaying on the operation display panel the image of the tablet contained in the vial read out by the vial reading unit from the image photographed by the photographing unit and stored in the storing unit (**Eller fig. 1 'works station' 28 and fig. 4 – PP0035**).

c. Regarding claim 16, Eller, as modified by Pearson and Williams, further teaches the tablet storage and take-out apparatus of claim 14, further comprising: a photo list displaying unit for displaying on the operation display panel a dispensed vial photo list screen including the image photographed by the photographing unit (**Eller PP0025 and 0035**) [**Note that by storing the filled prescription images and records together in a database, Eller teaches that the information can be accessed not only during fulfillment processing but afterwards to respond to customer inquiries**]; a displaying unit for displaying on the operation display panel the image of the tablet contained in the vial read

out by the vial reading unit from the image photographed by the photographing unit and stored in the storing unit (**Eller fig. 1 'workstation' 28 – PP0035**).

8. Claims 17, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eller et al. (U.S. Pg Pub No. 2008/0056556) in view of Pearson (U.S. Patent No. 5,292,029) and Williams et al. (U.S. Patent No. 5,597,995) as applied to claim 14 above, and further in view of Ogura et al. (U.S. Pg Pub No. 2001/0019100). Hereinafter referred to as Eller, Pearson, Williams and Ogura, respectively.

a. Regarding claims 17 and 20, Eller in view of Pearson and Williams teaches all the limitations of the independent claim 14, as set forth in the 35 U.S.C. 103 rejection of claim 14 above. As discussed above, Eller teaches the use of a camera to image the dispensed tablets for verification. Eller further teaches a bottle lift and rotate mechanism that maneuvers the bottles so as to facilitate the imaging of the bottle content and labels (**Eller PP0031 – 0033**). Eller; however, **does not teach** a focus control sensor for irradiating the surface of the filled tablets in the vial; and a focus control means for focus controlling the photographing means according to the detection value of the focus control sensor; wherein the photographing data of the photographing means after focus controlling by the focus control means is transferred to a control section of the tablet storage and take-out apparatus, and wherein the focus control means adopts as the detection value the mean value of the multiple detection values of the focus control sensor. **Pertaining to the same field of endeavor, Ogura**

teaches a focus detecting apparatus in which an autofocus operation is used to determine the optimal focus position of an imaging system. Specifically, Ogura teaches illuminating a target and repeatedly capturing an image of the target as the imaging lens is placed at different positions (Ogura PP0023). At each capture, a focus value is derived for each capture and the final focus value is determined by averaging the derived values. Finally, the lens is moved so as to match the resultant final focus value (Ogura PPs0027 – 0029). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to repeatedly capture images of the tablets using Eller's camera at various camera lens positions, to determine the focus values and to average the values so as to determine the optimal focus setting, as taught by Ogura, in order to automatically determine the camera lens position resulting in the best focused image so as to improve the discrimination accuracy of the tablet identification system.

b. Regarding claim 18, Eller in view of Pearson, Williams and Ogura teach all the limitations of the dependent claim 17, as set forth in the 35 U.S.C. 103 rejection of claim 17 above. As discussed above, Eller clearly teaches a camera as part of an imaging system for verification of filled prescriptions (**Eller fig. 1 'pill camera' 10 - PP0025**). Eller also teaches that the cameras and other components are controlled by a computer controller (**Eller PP0026**). Eller further teaches that once the bottles reach the appropriate position, the camera takes a

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picture of the pills (**Eller PP0032**). However, Eller does not specifically teach an initializing means for initializing the photographing means in accordance with a command from the control section. Official notice is taken that it is well known in the art that it is necessary to initialize a camera prior to capturing an image. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to turn on and initialize Eller's camera using Eller's computer controller in order to properly capture an image of the tablets being dispensed.

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eller et al. (U.S. Pg Pub No. 2008/0056556) in view of Pearson (U.S. Patent No. 5,292,029), Williams et al. (U.S. Patent No. 5,597,995) and Ogura et al. (U.S. Pg Pub No. 2001/0019100) as applied to claim 17 above, and further in view of Hamilton (U.S. Patent No. 6,738,723). Hereinafter referred to as Eller, Pearson, Williams, Ogura and Hamilton, respectively.

a. Regarding claim 19, Eller in view of Pearson, Williams and Ogura teach all the limitations of the dependent claim 17, as set forth in the 35 U.S.C. 103 rejection of claim 17 above. Eller; however, **does not teach** a contrast control means for controlling the contrast of the photographing means in accordance with a command from the control section. **Pertaining to the same field of endeavor, Hamilton teaches an automatic pill counting system in which a digital camera is used to image the pills to be counted on a pharmacist tray**

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and the image is analyzed to determine the number of pills. Specifically, Hamilton teaches that the tray surface on which the pills rest is illuminated by a liquid crystal display or the like. The color of the pills being counted is retrieved and input to a controller, based on this input, Hamilton teaches changing the color of the tray surface so that it provides a background which maximizes the contrast between the pills and surface (Hamilton Col. 7 lines 15 – 27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to change the color of the supporting surface in Eller, based on the known colors and characteristics of the tablets stored by Eller as part of the reference image database, as taught by Hamilton, so as to maximize the contrast between the tablets and the background resulting in improved shape detection and verification.

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eller et al. (U.S. Pg Pub No. 2008/0056556) in view of Pearson (U.S. Patent No. 5,292,029) and Williams et al. (U.S. Patent No. 5,597,995) as applied to claim 14 above, and further in view of Rzasa et al. (U.S. Pg Pub No. 2003/0174326). Hereinafter referred to as Eller, Pearson, Williams and Rzasa, respectively.

a. Regarding claim 21, Eller as modified by Pearson and Williams teaches all the limitations of the independent claim 14, as set forth in the 35 U.S.C. 103 rejection of claim 14 above. Eller further teaches a bottle lift and rotate mechanism that maneuvers the bottles so as to facilitate the imaging of the bottle

content and labels (**Eller PP0031 – 0033**). However, Eller **does not specifically teach** a supporting member for supporting the photographing means on the body of the tablet storage and take-out apparatus, the supporting means being movable horizontally in front and rear and left and right directions and also movable vertically. **Pertaining to the same field of endeavor, Rzasa teaches a similar pharmacy validation system that uses an imager to obtain spectrograph images which are compared with known values. Specifically, Rzasa teaches that the imaging detector is mounted on an assembly which is capable of moving up and down in order to adjust the focal point and to move in a circular or ring-shaped pattern to ensure the entire contents of the vial is inspected (Rzasa PP0049 and 0050 and Fig. 6). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to mount Eller's camera on a movable assembly, capable of moving up, down, left and right so as to more flexibly focus on tablets and labels at different heights, as desired by Eller, and to cover the entire field of view, as taught by Rzasa.**

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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- a. Louie et al. (U.S. Patent No. 7,747,477) teaches a pharmacy container tracking system including determining when a container is removed from a storage device, and verifying that it is the correct container.
- b. Geib et al. (U.S. Patent No. 5,713,648) teaches a medication dispensing system in which various medication containers are placed in a tray. The tray has a photoelectric sensor that detects when a container has been removed from the tray location.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. NEWMAN whose telephone number is (571)270-3016. The examiner can normally be reached on Mon - Thurs from 9:30am to 6:30pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A Newman/
Examiner, Art Unit 2624